



KNOWLEDGE AND ATTITUDE TOWARD LEARNING DISABILITIES AMONG PRIMARY SCHOOL TEACHERS IN DAMMAM, QATIF AND ALKHOBAR CITIES, K.S.A

Medicine

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ABSTRACT

Aim: to assess the awareness of learning disabilities among teachers of primary schools

Method: A cross-sectional survey that was conducted in female governmental primary integrated and non-integrated schools in Dammam, Alkhobar, Qatif and other cities using a validated self-administered questionnaire among 448 teachers in these areas

Results: Four hundred forty-eight female primary school teachers participated in the present study. About two-thirds (75.4%) of participant's teachers had low Knowledge about learning disabilities. Approximately one-half (51.8%) of participant's teachers had a low attitude about learning disabilities. As well as, 65.6% of participant's teachers had low Knowledge and attitude about learning disabilities. Age, nationality, marital status, having children and teaching grade of participants teachers did not significantly ($P \geq 0.05$) affect the teacher's knowledge and attitude. Each of the school region ($P = 0.010$), last education degree ($P = 0.012$), receiving workshops ($P = 0.007$) and having services and materials ($P = 0.013$) to students with learning disabilities in the schools were significantly ($P \leq 0.05$) affect the teacher's Knowledge and attitude about learning disabilities.

Conclusion: Primary school teachers who participated in the present study had poor Knowledge and attitude about learning disabilities in integrated and non-integrated schools in Dammam, Alkhobar, Qatif and other cities in Saudi Arabia.

KEYWORDS

knowledge; attitude; learning disabilities; school teachers

INTRODUCTION

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These problems are mainly due to neurological dysfunction. Those who are affected have normal intellectual ability compared to the population, or even higher. (1)

The most common type of learning disabilities is dyslexia which is a language-based disorder, affecting the ability to write, read and spell. Other types include 1) dyscalculia; which is an impaired in mathematical solving, 2) dysgraphia; which is a problem in the physical act of writing, auditory and visual processing disorder, 3) non-verbal learning disability. (2)

More than one type of learning disability may co-exist. Although they can appear at the same time, learning disabilities may be mistaken with other psychological disorders such as Autistic disorders and ADHD. This problem presents since birth, but usually not identified until the child enters the school.

The prevalence of learning disabilities worldwide ranges from 3 to 12 per cent and teachers, who have classes of 20 to 25 students in each, may have at least one or more students with learning disabilities. (3) It is estimated that the number of students who suffer from learning disabilities in KSA is more than 300,000 in public schools (KSCDR 2014). The real number expected to be even higher since there is no psychometric tool in the Arabic language. (4)

The Saudi ministry of education established a program for learning disabilities education which was first started in the primary schools in the year 1416/1417 AH for boys and girls, in three main cities of the Kingdom (Riyadh- Dammam- Jeddah). (5)

The result of Ismat Bano study, 2013 Pakistan, revealed a statistically significant difference in the knowledge of primary general school teacher compared to special education teachers, the most important recommendation is to have " *A well structured regular program of guidance and counselling with the help of well-trained teachers and psychologists should be launched to save the children with learning disabilities who go without identification in general schools.*" (6)

Teachers have an important role in early recognition of learning disabilities, as they are the first encounter in the process of education, their role is crucial in detecting the problem in its early stage, hence it will minimize the negative outcome, accordingly those who are affected will have better academic performance, quality of life, and

occupational future (7). A study done in Tanzania examined the presence of students with learning disabilities in the classes and whether or not the teachers were able to recognize them, showed a decreased level of awareness, and the teachers were not able to recognize them accurately, although 15% of the student had a learning disability. (8)

In an observational study done to compare the level of knowledge before and after informative session seminar given to the studied sample of teachers, showed that there is significant improvement of knowledge after the session concluded that teachers have superficial knowledge toward learning disabilities because they didn't receive any educational program about it during their training. (9)

School problems are an important challenge of family and community medicine. They include learning disabilities, ADHD, and emotional disturbance. Learning disabilities per se represent 7-10% of them. A multidisciplinary team of experts is needed for the management of these problems. (7)

In a study done on 2013 by Lucia Margari, about the neuro-psychopathological comorbidities in learning disorder, it concluded that among the specific learning disability subgroup, ADHD was present in 33%, Anxiety Disorder in 28.8%, Developmental Coordination Disorder in 17.8%, Language Disorder in 11% and Mood Disorder in 9.4% of patients. (10) Accordingly, the most important role of the Family physician is to assess children with a learning disability, exclude other psychological and medical causes. Other roles include advocating the family of a child with a learning disability in providing support and resources. As well as a coordinator between family and school for building a functioning environment. (11)

In Saudi Arabia, there are few studies conducted to explore teachers' awareness about detecting learning disabilities. The latest article was done by Alnaiem in 2015; the study didn't include a clear setting nor sample. (12) In 2012, Albaz conducted a study in Riyadh, KSA. The study aimed to measure the level of awareness among kindergarten teachers toward learning difficulties' signs. The result of the study concluded that there is an overall low level of awareness, mainly toward motor signs of learning disability. The recommendation emphasizes establishing an Arabic tool for identifying students with learning disabilities and advised for conducting more researches in different regions of the kingdom to ensure the importance of awareness. (13)

The researches of this topic are relatively insufficient under the scope of family medicine. The family physician should pay more attention to

learning disabilities. A step to be done to improve the early detection of learning disabilities is to evaluate teachers' ability of detection to preserve the children from social and psychological suffering. As the literature emphasized that present of learning disability among children who usually identified after failing the first grade. Therefore it is important to assess the knowledge and attitude of the teachers toward early detection of a child with a learning disability.

MATERIALS AND METHOD

A cross-sectional survey was conducted in female governmental primary integrated and non-integrated schools in Dammam, alkhobar, Qatif without and cities Female primary school teachers in both integrated and non-integrated schools governmental primary school teachers were included. Special education teachers were not to be included.

A validated self-administered questionnaire distributed to the teachers in the selected schools and collected after their response.

The questionnaire was translated into the Arabic language, and a pilot study was done to ensure validity.

The questionnaire had two sections, the first one is demographic data and the second is the knowledge and attitude section.

Data analysis:

Data were recorded and analyzed using SPSS v22. Appropriate statistic tools were be used after collection of data.

Ethical consideration:

The research was conducted after the (IRB) Institutional Review Board approval and after the acceptance of General Directorate of Education in Alkhobar , Dammam and Qatif Written informed consent was attached to the questionnaires to ensure anonymity and confidentiality.

RESULTS

Table (1): Descriptive statistics of basic characteristics

	Description (n=448)
School region	
Dammam	106 (23.7)
Qatif	96 (21.4)
Khobar	148 (33)
Other regions	98 (21.9)
Age	
23-33	38 (8.5)
34-43	260 (58)
44-53	143 (31.9)
> 53	7 (1.6)
Nationality	
Saudi	446 (99.6)
Non-Saudi	2 (0.4)
Marital status	
Married	398 (88.8)
Single	27 (6)
Divorced	17 (3.8)
Widow	6 (1.3)
Do you have children?	
Yes	400 (89.3)
No	48 (10.7)
Teaching grade	
1st	199 (44.4)
2nd	160 (35.7)
3rd	89 (19.9)
Last education degree	
Bachelor	338 (75.4)
Diploma	100 (22.3)
Higher education	5 (1.1)
Others	5 (1.1)
Last education degree	
Bachelor	338 (75.4)
Less than Bachelor	110 (24.6)
Teaching subject	
Several	197 (44)

Arabic	68 (15.2)
Mathematics	63 (14.1)
Islamic	46 (10.3)
Social	15 (3.3)
Others	59 (13.2)
Years of experience	
0-5	30 (6.7)
5-10	101 (22.5)
10-15	52 (11.6)
>15	265 (59.2)
Have you worked in an integrated school before?	
Yes	263 (58.7)
No	185 (41.3)
Are there any students in your classroom with learning disabilities?	
Yes	313 (69.9)
No	135 (30.1)
Did you receive any workshop about learning disabilities in your career?	
Yes	152 (33.9)
No	296 (66.1)
Did you receive any training course about the audiologist work at school?	
Yes	28 (6.3)
No	420 (93.8)
Does your school have available services and materials to students with learning disabilities?	
Yes	270 (60.3)
No	178 (39.7)

Table 1 shows that 448 female primary school teachers participated in the present study. 33% of participants were from Khobar, 23.7% were from Dammam, 21.4% were from Qatif, and 21.9% were from other regions in Saudi Arabia. More than one-half of participants (58%) were between 34-43 years in age, and about one-third (31.9%) were between 44-53 years in age. The majority of our participants (99.6%) were Saudi, married (88.8%), had children (89.3%), and had a Bachelor degree (75.4%). Approximately one-half of teachers (44.4%) were teaching to 1st grade, 35.7% were teaching to 2nd grade, and 19.9% were teaching to 3rd grade. More than one-half of participants (59.2%) had more than 15 years of experience and had worked in an integrated school before (58.7%). Approximately two-thirds of teachers (69.9%) had students in their classroom with learning disabilities. The majority of participant's teachers (93.8%) had not received any training course about the audiologist work at school and had not received any workshop about learning disabilities in their career (66.1%). More than one-half of participants (60.3%) had available services and materials to students with learning disabilities in their school.

Table 2: Descriptive statistics of Knowledge & Attitude questionnaire

Knowledge questionnaire	Description (n=448)
Which causes may justify the reading and writing disorder?	
Learning difficulties	219 (48.9)
Lack of interest in the family	106 (23.7)
Some organic disorder (deficiency) intrinsic causes-physiological, biological	23 (5.1)
Teaching method- teacher/ school	100 (22.3)
How can you name this problem?	
Dyslexia	224 (50)
Disorder	113 (25.2)
ADHD	2 (0.4)
Phonological disorder	11 (2.5)
Discography	98 (21.9)
Are related to the curriculum content, which is not appropriate to students needs	
Agree	243 (54.2)
Disagree	114 (25.4)
I don't know	91 (20.3)
Caused by the environment orthographic t at home	
Agree	242 (54)
Disagree	91 (20.3)
I don't know	115 (25.7)

Are related to an excess of work of the teachers impairing planning and elaboration of classes	
Agree	358 (79.9)
Disagree	58 (12.9)
I don't know	32 (7.1)
Are caused by indiscipline of the students	
Agree	243 (54.2)
Disagree	147 (32.8)
I don't know	58 (12.9)
They are caused by the cultural level of the parents and the students	
Agree	263 (58.7)
Disagree	135 (30.1)
I don't know	50 (11.2)
They are related to the lack of assistance and follow up of the family students concerning homework	
Agree	317 (70.8)
Disagree	85 (19)
I don't know	46 (10.3)
They occur due to lack of inabilities and skills of the students	
Agree	309 (69)
Disagree	87 (19.4)
I don't know	52 (11.6)
They occur due to lack of interest and lack of efforts of the students	
Agree	293 (65.4)
Disagree	80 (17.9)
I don't know	75 (16.7)
They are linked to the low self-esteem of the students	
Agree	294 (65.6)
Disagree	90 (20.1)
I don't know	64 (14.3)
Some children with dyslexia are good at arts, theatre, music, sports, design	
Agree	355 (79.2)
Disagree	20 (4.5)
I don't know	73 (16.3)
Children with dyslexia always present with writing problems	
Agree	305 (68.1)
Disagree	80 (17.9)
I don't know	63 (14.1)
Low intellectual level is one of the characteristics of dyslexic children	
Agree	276 (61.6)
Disagree	107 (23.9)
I don't know	65 (14.5)
Children with dyslexia may be more creative than other children which allow them to overcome their difficulties.	
Agree	270 (60.3)
Disagree	69 (15.4)
I don't know	109 (24.3)
Dysorthography is a specific disorder which is characterized by written mistakes, without impairing reading	
Agree	200 (44.6)
Disagree	118 (26.3)
I don't know	130 (29)
Dyslexia is difficult to detect, due to a different manifestation	
Agree	177 (39.5)
Disagree	145 (32.4)
I don't know	126 (28.1)
Discography is a functional writing disorder which affects witting quality, even if there are not orthographic mistakes	
Agree	269 (60)
Disagree	67 (15)
I don't know	112 (25)

it makes no difference the age to start the intervention toward the success of children with dyslexia	
Agree	167 (37.3)
Disagree	180 (40.2)
I don't know	101 (22.5)
the onset of dyslexia is associated with the socioeconomic level of children	
Agree	76 (17)
Disagree	311 (69.4)
I don't know	61 (13.6)
copy of texts is an appropriate exercise for this kind of children	
Agree	252 (56.3)
Disagree	67 (15)
I don't know	129 (28.8)
Attitude questionnaire	
In your opinion when facing a child with learning disabilities, you should correct the situation by	
Repetition exercises	162 (36.2)
Correction- tell the student where the mistake is – and ask her to redo it	81 (18.1)
I suggest challenging activates	31 (6.9)
I call the parents	136 (30.4)
I don't know	38 (8.5)
In your opinion when you suspect or detect a problem, who (professional) do you refer the child to?	
School director	94 (21)
Teachers of special education	361 (80.6)
Psychologist	71 (15.8)
Speech therapist and audiologist	140 (31.3)
Others	58 (12.9)
In your opinion children with reading and writing difficulties should be followed up in integrated schools only?	
Agree	375 (83.7)
Disagree	52 (11.6)
I don't know	21 (4.7)
In your opinio, specialized intervention is necessary to overcome learning disabilities?	
Agree	424 (94.6)
Disagree	10 (2.2)
I don't know	14 (3.1)
Knowledge	
High (> 50%)	110 (24.6)
Low (≤ 50%)	338 (75.4)
Attitude	
High (> 50%)	216 (48.2)
Low (≤ 50%)	232 (51.8)
Knowledge & Attitude	
High (> 50%)	154 (34.4)
Low (≤ 50%)	294 (65.6)

Table 2 shows that about two-thirds (75.4%) of participant's teachers had low Knowledge about learning disabilities. Approximately one-half (51.8%) of participant's teachers had a low attitude about learning disabilities. As well as, 65.6% of participant's teachers had low Knowledge and attitude about learning disabilities.

Table 3: Determinants of high knowledge

	Knowledge		P value*
	High (> 50%) (n=110)	Low (≤ 50%) (n=338)	
School region			
Dammam	20 (18.2)	86 (25.4)	0.120
Qatif	18 (16.4)	78 (23.1)	0.136
Khobar	44 (40)	104 (30.8)	0.074
Other regions	28 (25.5)	70 (20.7)	0.296
Age			
23-33	13 (11.8)	25 (7.4)	0.148
34-43	59 (53.6)	201 (59.5)	0.282
44-53	37 (33.6)	106 (31.4)	0.657
> 53	1 (0.9)	6 (1.8)	0.525

Nationality			
Saudi	109 (99.1)	337 (99.7)	0.431
Non-Saudi	1 (0.9)	1 (0.3)	
Marital status			
Married	103 (93.6)	295 (87.3)	0.066
Single	3 (2.7)	24 (7.1)	0.094
Divorced	4 (3.6)	13 (3.8)	0.920
Widow	0 (0)	6 (1.8)	0.159
Do you have children?			
Yes	103 (93.6)	297 (87.9)	0.089
No	7 (6.4)	41 (12.1)	
Teaching grade			
1st	56 (50.9)	143 (42.3)	0.115
2nd	31 (28.2)	129 (38.2)	0.058
3rd	23 (20.9)	66 (19.5)	0.752
Last education degree			
Bachelor	93 (84.5)	245 (72.5)	0.011
Diploma	15 (13.6)	85 (25.1)	0.012
Higher education	2 (1.8)	3 (0.9)	0.600
Others	0 (0)	5 (1.5)	0.340
Last education degree			
Bachelor	93 (84.5)	245 (72.5)	0.011
Less than Bachelor	17 (15.5)	93 (27.5)	
Teaching subject			
Several	50 (45.5)	147 (43.5)	0.719
Arabic	18 (16.4)	50 (14.8)	0.690
Mathematics	13 (11.8)	50 (14.8)	0.436
Islamic	10 (9.1)	36 (10.7)	0.640
Social	3 (2.7)	12 (3.6)	0.677
Others	16 (14.5)	43 (12.7)	0.623
Years of experience			
0-5	14 (12.7)	16 (4.7)	0.004
5-10	18 (16.4)	83 (24.6)	0.074
10-15	11 (10)	41 (12.1)	0.545
>15	67 (60.9)	198 (58.6)	0.666
Have you worked in integrated school before?			
Yes	68 (61.8)	195 (57.7)	0.445
No	42 (38.2)	143 (42.3)	
Are there any students in your classroom with learning disabilities?			
Yes	78 (70.9)	235 (69.5)	0.784
No	32 (29.1)	103 (30.5)	
Did you receive any workshop about learning disabilities in your career?			
Yes	51 (46.4)	101 (29.9)	0.002
No	59 (53.6)	237 (70.1)	
Did you receive any training course about the audiologist work at school?			
Yes	11 (10)	17 (5)	0.061
No	99 (90)	321 (95)	
Does your school have available services and materials to students with learning disabilities?			
Yes	75 (68.2)	195 (57.7)	0.051
No	35 (31.8)	143 (42.3)	
Attitude			
High (> 50%)	53 (48.2)	163 (48.2)	0.994
Low (≤ 50%)	57 (51.8)	175 (51.8)	

*Chi-square test, Bonferroni adjustment was considered

Table 3 shows that School region, Age, Nationality, Marital status, having children and teaching grade of participants teachers did not significantly ($P \geq 0.05$) affect the teacher's Knowledge. Last education degree significantly ($P \leq 0.05$) affect Knowledge. Teachers had a Bachelor degree had high Knowledge (84.5%, $P=0.011$) while the Knowledge of teachers who had Diploma was 13.6% ($P=0.012$). Years of experience ($P=0.004$) and receiving any workshop about learning disabilities ($P=0.002$) were significant affects the Knowledge of teachers.

Table 4: Determinants of high Attitude

	Attitude		P value*
	High (> 50%) (n=216)	Low (≤ 50%) (n=232)	
School region			
Dammam	44 (20.4)	62 (26.7)	0.114
Qatif	52 (24.1)	44 (19)	0.188
Khobar	70 (32.4)	78 (33.6)	0.785
Other regions	50 (23.1)	48 (20.7)	0.529
Age			
23-33	16 (7.4)	22 (9.5)	0.431
34-43	125 (57.9)	135 (58.2)	0.945
44-53	71 (32.9)	72 (31)	0.677
> 53	4 (1.9)	3 (1.3)	0.716
Nationality			
Saudi	214 (99.1)	232 (100)	0.232
Non-Saudi	2 (0.9)	0 (0)	
Marital status			
Married	193 (89.4)	205 (88.4)	0.740
Single	11 (5.1)	16 (6.9)	0.423
Divorced	9 (4.2)	8 (3.4)	0.691
Widow	3 (1.4)	3 (1.3)	0.930
Do you have children?			
Yes	192 (88.9)	208 (89.7)	0.793
No	24 (11.1)	24 (10.3)	
Teaching grade			
1st	102 (47.2)	97 (41.8)	0.249
2nd	77 (35.6)	83 (35.8)	0.978
3rd	37 (17.1)	52 (22.4)	0.161
Last education degree			
Bachelor	162 (75)	176 (75.9)	0.832
Diploma	49 (22.7)	51 (22)	0.858
Higher education	2 (0.9)	3 (1.3)	0.712
Others	3 (1.4)	2 (0.9)	0.596
Last education degree			
Bachelor	162 (75)	176 (75.9)	0.832
Less than Bachelor	54 (25)	56 (24.1)	
Teaching subject			
Several	100 (46.3)	97 (41.8)	0.339
Arabic	29 (13.4)	39 (16.8)	0.318
Mathematics	36 (16.7)	27 (11.6)	0.126
Islamic	23 (10.6)	23 (9.9)	0.798
Social	7 (3.2)	8 (3.4)	0.903
Others	21 (9.7)	38 (16.4)	0.222
Years of experience			
0-5	14 (6.5)	16 (6.9)	0.861
5-10	48 (22.2)	53 (22.8)	0.875
10-15	29 (13.4)	23 (9.9)	0.246
>15	125 (57.9)	140 (60.3)	0.594
Have you worked in integrated school before?			
Yes	123 (56.9)	140 (60.3)	0.465
No	93 (43.1)	92 (39.7)	
Are there any students in your classroom with learning disabilities?			
Yes	154 (71.3)	159 (68.5)	0.524
No	62 (28.7)	73 (31.5)	
Did you receive any workshop about learning disabilities in your career?			
Yes	80 (37)	72 (31)	0.180
No	136 (63)	160 (69)	
Did you receive any training course about the audiologist work at school?			
Yes	11 (5.1)	17 (7.3)	0.329
No	205 (94.9)	215 (92.7)	

Does your school have available services and materials to students with learning disabilities?			
Yes	132 (61.1)	138 (59.5)	0.725
No	84 (38.9)	94 (40.5)	

*Chi-square test, Bonferroni adjustment was considered

Table 4 shows that school region, age, nationality, marital status, having children and teaching grade of participants teachers did not significantly ($P \geq 0.05$) affect the teacher's attitude. Additionally, Last education degree, Years of experience and receiving any workshop were not significantly ($P \geq 0.05$) affects the teacher's attitude about learning disabilities.

Table 5: Determinants of high Knowledge & Attitude

	Knowledge & Attitude		P value*
	High (> 50%) (n=154)	Low (\leq 50%) (n=294)	
School region			
Dammam	29 (18.8)	77 (26.2)	0.082
Qatif	27 (17.5)	69 (23.5)	0.146
Khobar	63 (40.9)	85 (28.9)	0.010
Other regions	35 (22.7)	63 (21.4)	0.752
Age			
23-33	13 (8.4)	25 (8.5)	0.982
34-43	88 (57.1)	172 (58.5)	0.782
44-53	51 (33.1)	92 (31.3)	0.694
> 53	2 (1.3)	5 (1.7)	0.745
Nationality			
Saudi	153 (99.4)	293 (99.7)	0.641
Non-Saudi	1 (0.6)	1 (0.3)	
Marital status			
Married	142 (92.2)	256 (87.1)	0.101
Single	6 (3.9)	21 (7.1)	0.170
Divorced	5 (3.2)	12 (4.1)	0.660
Widow	1 (0.6)	5 (1.7)	0.358
Do you have children?			
Yes	142 (92.2)	258 (87.8)	0.148
No	12 (7.8)	36 (12.2)	
Teaching grade			
1st	70 (45.5)	129 (43.9)	0.750
2nd	50 (32.5)	110 (37.4)	0.299
3rd	34 (22.1)	55 (18.7)	0.396
Last education degree			
Bachelor	127 (82.5)	211 (71.8)	0.012
Diploma	24 (15.6)	76 (25.9)	0.013
Higher education	2 (1.3)	3 (1)	0.790
Others	1 (0.6)	4 (1.4)	0.496
Last education degree			
Bachelor	127 (82.5)	211 (71.8)	0.012
Less than Bachelor	27 (17.5)	83 (28.2)	
Teaching subject			
Several	65 (42.2)	132 (44.9)	0.586
Arabic	27 (17.5)	41 (13.9)	0.315
Mathematics	20 (13)	43 (14.6)	0.636
Islamic	17 (11)	29 (9.9)	0.697
Social	3 (1.9)	12 (4.1)	0.233
Others	22 (14.3)	37 (12.6)	0.613
Years of experience			
0-5	14 (9.1)	16 (5.4)	0.142
5-10	33 (21.4)	68 (23.1)	0.682
10-15	15 (9.7)	37 (12.6)	0.372
>15	92 (59.7)	173 (58.8)	0.854
Have you worked in integrated school before?			
Yes	97 (63)	166 (56.5)	0.183
No	57 (37)	128 (43.5)	
Are there any students in your classroom with learning disabilities?			
Yes	108 (70.1)	205 (69.7)	0.930
No	46 (29.9)	89 (30.3)	

Did you receive any workshop about learning disabilities in your career?			
Yes	65 (42.2)	87 (29.6)	0.007
No	89 (57.8)	207 (70.4)	
Did you receive any training course about the audiologist work at school?			
Yes	13 (8.4)	15 (5.1)	0.165
No	141 (91.6)	279 (94.9)	
Does your school have available services and materials to students with learning disabilities?			
Yes	105 (68.2)	165 (56.1)	0.013
No	49 (31.8)	129 (43.9)	

*Chi-square test, Bonferroni adjustment was considered

Table 5 shows that age, nationality, marital status, having children and teaching grade of participants teachers did not significantly ($P \geq 0.05$) affect the teacher's knowledge and attitude. Each of the school region ($P=0.010$), last education degree ($P=0.012$), receiving workshops ($P=0.007$) and having services and materials ($P=0.013$) to students with learning disabilities in the schools were significantly ($P \leq 0.05$) affect the teacher's Knowledge and attitude about learning disabilities.

DISCUSSION

Learning disability (LD) is one of the most complicated disorders introduced to the area of psychology and teaching of exceptional children. Despite having normal IQ and not having any kinds of physical or emotional problems, children with LD suffer from learning disorders and their educational and learning performance are considerably different from what is expected from them (14). Many of these students become disappointed because they fail to succeed in their education and eventually quit school early. Furthermore, if their problems are not recognized and suitable interfering programs are not provided, the risk of some disorders like depression, anxiety and delinquency increases for these children (15).

In the present study, 448 female primary school teachers participated in the questionnaire. 33% of participants were from Khobar, 23.7% were from Dammam, 21.4% were from Qatif, and 21.9% were from other regions in Saudi Arabia. More than one-half of participants (58%) were between 34-43 years in age, and about one-third (31.9%) were between 44-53 years in age. The majority of our participants (99.6%) were Saudi, married (88.8%), had children (89.3%), and had a Bachelor degree (75.4%). Approximately one-half of teachers (44.4%) were teaching to 1st grade, 35.7 % were teaching to 2nd grade, and 19.9% were teaching to 3rd grade. More than one-half of participants (59.2%) had more than 15 years of experience and had worked in an integrated school before (58.7%). Approximately two-thirds of teachers (69.9%) had students in their classroom with learning disabilities. The majority of participant's teachers (93.8%) had not received any training course about the audiologist work at school and had not received any workshop about learning disabilities in their career (66.1%). More than one-half of participants (60.3%) had available services and materials to students with learning disabilities in their school.

The prevalence of LD in different regions of the world is estimated from 3 -12 % and teachers, who have classes of 20- 25 students in each, may have at least 1, 2 or more students with LD (16). The estimation of learning disability in the population of school children ranges from the lowest estimation of about 2% to the highest estimation about 20-40% (17). These international results wasn't matching with our results which reported higher prevalence of LD among our population where more than two thirds of them 69.9% had learning disabilities, also mismatched with a Saudi study in which only 23.89% of the students had learning difficulty in Riyadh city schools (25), the high prevalence among our population may be caused by learning difficulties, lack of interest in the family, some organic disorder (deficiency) intrinsic causes-physiological, biological and using of inappropriate teaching method- teacher/ school.

The British Dyslexia Association describes dyslexia as a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling (21). Dyslexia is the most common

